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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,367	09/30/2003	Liang Jiang	132347-1	5979
23413	7590	11/10/2005	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			ALEXANDER, MICHAEL P	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

6

<b>Office Action Summary</b>	<b>Application No.</b> 10/675,367	<b>Applicant(s)</b> JIANG ET AL.	
	<b>Examiner</b> Michael P. Alexander	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 13-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/29/04, 9/23/05</u>  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

Claims 1-21 are pending.

#### ***Election/Restrictions***

Applicant's election of Group I in the reply filed on 24 October 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 13-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 24 October 2005.

#### ***Claim Objections***

Claims 2 and 4 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 2 and 4 state, "wherein the sum of the amount of aluminum and titanium is about 2 to about 9." However, claim 1 states that the aluminum is at least about 1.5 and the titanium is at least about 1.5.

Claim 6 is objected to because of the following informalities: "zirconia" should read – zirconium --. Appropriate correction is required.

***Claim Interpretations***

The Examiner would like set forth his interpretation of the limitation "up to" in claims 1 and 11. The Examiner asserts that this would include the absence of the claimed element.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Simkovich et al. (US 6,177,046).

Regarding claim 1, Simkovich et al. teach (see Table 2) a nickel-containing alloy comprising: 3.4 weight percent aluminum, 3.4 weight percent titanium, 0.9 weight percent niobium, and 16 weight percent chromium; with the remainder being nickel.

Regarding claim 2, Simkovich et al. teach (see Table 2) that the sum of aluminum and titanium is 6.8 weight percent, of the nickel-containing alloy.

Regarding claim 4, Simkovich et al. teach (see Table 2) that the sum of titanium, aluminum and niobium is 7.7 weight percent, of the nickel-containing alloy.

Regarding claim 5, Simkovich et al. teach (see Table 2) that the nickel is present in an amount of about 61.3 weight percent, of the nickel-containing alloy.

Regarding claim 6, Simkovich et al. teach (see Table 2) that the alloy further comprises cobalt, carbon, zirconium, tungsten, boron, tantalum, and molybdenum.

Art Unit: 1742

Regarding claim 7, Simkovich et al. teach (see Table 2) that cobalt is present in an amount of 18.5 weight percent, of the nickel-containing alloy.

Regarding claim 9, Simkovich et al. teach (see Table 2) that tungsten is present in amount of 2.6 weight percent, of the nickel-containing alloy.

Regarding claim 10, Simkovich et al. teach (see Table 2) that boron is present in amount of 0.01 weight percent, of the nickel-containing alloy.

Claims 1, 3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US 6,258,317).

Regarding claim 1, Smith et al. teach (see table 2B, alloy B) a nickel-containing alloy comprising: 1.5 weight percent aluminum, 2.5 weight percent titanium, no niobium, and 20.00 weight percent chromium, with the remainder being nickel.

Regarding claim 3, the alloy of Smith et al. (see table 2B, alloy B) would inherently have an atomic ratio of aluminum to titanium of about 0.5 to about 1.5.

Regarding claim 8, Smith et al. teach (see table 2B, alloy B) that the carbon is present in an amount of 0.13 weight percent, of the nickel-containing alloy.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1742

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 6,258,317).

Regarding claim 11, Smith et al. teaches (see Table 1) a nickel-containing alloy comprising by weight percent: 0.3-2.5% Al; 0.3-2.7% Ti; 0.2-2.2% Nb; 22.8-29% Cr; 12-23% Co; 0.01-0.2% C; 0-2% W; 0.002-0.009% B; 0.01-0.2% Zr; with the remainder being nickel. The ranges of each of the elements of Smith et al. overlap with that of the claimed invention. It is prima facie evidence of obviousness when a prior art range overlaps with the claimed range. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art to select the desired amounts of Al, Ti, Nb, Cr, Co, C, W, B and Zr from the ranges disclosed by Smith et al. because Smith et al. teach the same utility throughout the disclosed range.

Regarding claim 12, Smith et al. does not specify that it is necessary that the alloy contain any hafnium. However, the instant claim does not require the substitution of Zr by Hf due to the language of "may be". Therefore, Smith et al.'s alloy still meets the claimed alloy composition.

Art Unit: 1742

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Alexander whose telephone number is 571-272-8558. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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